Vehicle Leasing or Purchase Program

BACKGROUND OF THE INVENTION

This application claims the benefit of Provisional Patent Application No. 60/413,465 filed 9/23/2002, and the entire contents of which is hereby incorporated by

5   reference.

BRIEF SUMMARY OF THE INVENTION

The applicant has provided an inventive vehicle leasing or purchase evaluation system which includes a computer; a database of vehicle information; a

10   computer program configured to run in the computer and having access to the database of vehicle information, and the computer program configured to provide a list of vehicles having a monthly lease or purchase payment falling within a user defined range, given a term and interest rate and tax status. The list may be sorted and filtered based on user provided criteria.

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BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Figure 1 shows a block diagram of the main screens of the program labeled Sheet 1;

Figure 2 shows the "State, Term and Tax Status" screen no. 26;

20   Figure 3 shows the "Choice Window" screen no. 29;

Figure 4 shows a block diagram labeled Sheet 2 of the screens available if Lease and Monthly Payment are selected in screen no. 29 of Figure 3;

Figure 5 shows the "Leasing Window" screen no. 12;

Figure 5A shows the help menu in Figure 5;

25   Figure 5B shows the "Sort data" menu in Figure 5;

Figure 6 shows the "Standard Features" screen no. 11 and the left half of screen no. 12;

Figure 7 shows individual data for a selected vehicle (screen no. 20);

Figure 7A shows a help screen which explains holdback;

30   Figure 8 shows an amortization schedule for a selected vehicle (screen no. 2);

Figure 9 shows the "Compare Two Vehicles" screen no. 12;

Figure 10 shows the "Extra cost options for Cars" screen;

Figure 11 shows the filtered form 20 with the options selected from

35   Figure 10 (screen no. 16);

Figure 12 shows a list of features used for filtering (screen no. 19);

Figure 13 shows the filtered form 20 with the features selected from Figure 12 (screen no. 23);

Figure 14 shows a block diagram labeled Sheet 3 of the screens available if Buy and Monthly Payment are selected in screen no. 29 of Figure 3;

Figure 15 shows the "Buying Window" screen no. 13;

Figure 16 shows the slide bar used to change the monthly payment range and refilter screen no. 13;

Figure 17 shows the "Compare Two Vehicles" screen no. 13;

Figure 18 shows a block diagram labeled Sheet 4 of the screens available if Maker and Buy or Lease are selected in screen no. 29 of Figure 3;

Figure 19 shows the "Find a Sedan (or Truck)" screen no. 14;

Figure 20 shows an "Evaluate a Discount" screen no. 25.

Figure 21 shows an Options selection screen no. 9;

Figure 22 shows a list of vehicles filtered with the options selected in Figure 21;

Figure 23 shows an Features selection screen no. 7;

Figure 24 shows a list of vehicles filtered with the features selected in Figure 23, and

Figure 25 shows the "Lease Detective" screen no. 22.

DETAILED DESCRIPTION OF THE INVENTION

While this invention may be embodied in many different forms, there are described in detail herein specific preferred embodiments of the invention. This description is an exemplification of the principles of the invention and is not intended to limit the invention to the particular embodiments illustrated.

For the purposes of this disclosure, like reference numerals in the figures shall refer to like features unless otherwise indicated.

The detailed description utilizes terms which have the following definitions:

Residual value: The value of the vehicle at the end of the lease term. It is usually the wholesale value, but not necessarily, as it may differ on a given vehicle depending on which entity puts up the money to buy the vehicle from the manufacturer.

The inventive program is designed to be run on a computer having access to a vehicle information database, such as the database which is available for license from ALG, (Automotive Lease Guide) LLC, a California Limited Liability

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corporation. This database includes every four wheel passenger vehicle for sale in the US from all manufacturers (approximately 11,000). Other commercially available databases are available and could be utilized if desired.

The inventive program could also be run on a computer having an internet connection, with the program available from a server having an internet connection, and having access to the database.

The inventive program was written using Microsoft Visual Basic 6.0 and Microsoft Access, although it should be understood that it could be written in any commercially available programming language. The font size and font colors of all of the forms shown and described can be user selected by using the Microsoft common dialogs, as is well known in the art.

Referring now to Fig. 1, a block diagram of the inventive program is shown generally at 10. Block 14 refers to screen 26, Fig. 2, at which the user specifies the state, at reference numeral 16, the vehicle class, at reference numeral 18, the taxpayer type, at reference numeral 20, and the term of the lease or purchase, at reference numeral 22. When the user clicks the "Next" button on form 26, the user is taken to form or screen 29, which is reference numeral 24 in Figure 1 and also shown in detail at Figure 3.

Referring now to reference numeral 24 and Figure 3 (form 29), the user now selects an analysis based on either lease or purchase by clicking on either the lease button 26 or the buy button 28. The user also must select one of the four buttons 30, 32, 34 or 36, labeled respectively Monthly payment, Maker, Options and Features. Form 29 also has two other buttons available, the cash-back offer button 38 or the lease detective button 40. If the user selects either button 38 or 40, the forms identified as reference numerals 42 (see Figure 20) and 44 (see Figure 25) in Figure 1 are immediately called up. Once the user selects any of the buttons 26, 28, 30, 32, 34 or 36 buttons 38 and 42 are hidden and not available as options unless the user starts over (available through the menu). Finally, a monthly payment (high limit, low limit and spread) are shown at 43. These amounts may be changed using the slide bar shown at 45.

If the user has selected Lease (reference numeral 26) and Monthly payment (reference numeral 30) then when the user clicks the "Next" button they are taken to block 46 of Figure 1. Block 46 represents Sheet 2, which is a block diagram shown in more detail in Figure 4. Form or screen 12 (see Figure 5) is displayed, which lists all vehicles in the database of vehicle information accessed by the program which

fall within the monthly payment range specified at 43 in Form 29. As can be seen from Figure 5, columns showing the row no., lease payment, MSRP, Make, Model, Model No. and Description are provided for each listed vehicle within the payment range.

Under the menu item "Window options", at 51 in Figure 5 are the items shown at reference numeral 48 of Figure 5: "Show standard features" at 50; "Show individual financial data" at 52, and "Compare any two vehicles" at 54. The user can adjust the click on any of the four highlighted areas in box 53 of Figure 5 and adjust the high or low limits, the spread between the high or low limits and the interest rate, using the slide bar 55.

Figure 5A shows form or screen 12 with the "Help" menu displayed. If the user selects any of the available help items a window with an explanation of the selected item is displayed.

Figure 5B shows the drop down menu under menu heading "Sort Data", which allows sorting and merging the data in either descending or ascending order; to sort "By Common options" at 56; and to sort "By Standard features" at 58.

If item 50 is selected from the Window options of form 12 of Figure 5, the user is prompted to select a row, and the standard features of the selected vehicle are displayed as shown in Figure 6 (form or screen 11), as shown at block 62 of Figure 4 and 6.

If item 52 is selected from the Window options of form 12 of Figure 5, the user is prompted to click in the Model column of any vehicle row, a "Show Financial Data" button is displayed on form 12 (see Figure 5B), which when selected takes the user to block 64 of Figure 4, or form 20, which is shown in detail at Figure 7. Figure 7 displays financial information about the selected vehicle for the selected vehicle given the parameters entered at form 26 and form 29. The user can also change any of the items (except row 5 holdback) in Items 71 in Figure 7, using the slidebar. When the user clicks on the holdback cell in row 5, a message box opens (see Figure 7A) which explains holdback to the user. If the user clicks on the "Show payment vs. dealer profit" button 66 of form 20, then form 4 is displayed (Figure 8), as shown at block 68 in Figure 4. Form 4 (reference numeral 68) is an amortization table for the vehicle shown on form 20, reflecting the interest rate, term, taxpayer status and dealer profit. The "Go back" button 70 in Figure 8 (form 4) takes the user back to form 20 or Figure 7. The "Pick a different vehicle" button 72 in form 20 takes the user back to form 12 or Figure 5.

If item 54 is selected from the Window options of form 12, the user is prompted to click on the MSRP of two different vehicles listed in form 12, and then Figure 9 is displayed, which shows some graphical and text information comparing the two selected vehicles.

If item 56 is selected from the "Sort Data" menu of form 12, then the form of Figure 10 is pulled up (reference numeral 73 from Figure 4)(the options displayed in Figure 10 is representative only), allowing the user to click on options, which are displayed in the "Selected options" list. Once the user clicks the "Show qualifying vehicles" button 74, form 12 is filtered as shown in form 16 (Figure 11)(reference 75 from Figure 4).

If item 58 is selected from the "Sort Data" menu of form 12, then the form of Figure 12 is pulled up (form 19)(reference numeral 76 from Figure 4), allowing the user to click on features, which are displayed in the "Selected features" list. Once the user clicks the "Show qualifying vehicles" button 78, form 12 is filtered as shown in form 23 (Figure 13)(reference numeral 80 from Figure 4).

If the user has selected Buy (reference numeral 28) and Monthly payment (reference numeral 30) in Figure 2 then when the user clicks the "Next" button they are taken to block 81 of Figure 1. Block 81 represents Sheet 3, which is a block diagram shown in more detail in Figure 14. Form or screen 13 (reference numeral 82 in Figure 14)(see Figure 15) is displayed, which lists all vehicles in the database of vehicle information accessed by the program which fall within the monthly payment range specified at 43 in Form 29. As can be seen from Figure 15, columns showing the row no., lease payment, MSRP, Make, Model, Model No. and Description are provided for each listed vehicle within the payment range. The forms and flow of the program are the same for buying as they are for leasing (with the added column of "ratio" – which is the estimated trade divided by the MSRP), with the text headings of the various forms changed to reflect a purchase rather than a lease. Therefore, the reference numerals for the various blocks are the same in Figure 14 as they are in Figure 4.

Figure 16 illustrates a feature of the inventive program available for both the lease and buy options, discussed above. If the user clicks on any of the three cells high limit; low limit or spread, the slide bar 84 appears and can be used to adjust the selected cell. Form 13 if buying or form 12 if leasing is then updated with the list of vehicles matching the newly altered monthly payment range.

Figure 17 shows the comparison of two vehicles under the buy option, similar to Figure 9 for leasing.

Referring again to Figure 1, if the Maker button 32 is selected, along with either Lease or Buy, then Sheet 4 at 90 shows the forms available for this option. Form 14 at 90 in Figure 19 allows the user to select either sedans or trucks, select a manufacturer and model, as shown in Figure 19. Under the Window Options menu items are 92 – "Standard features" and 94 – "Individual financial data". As discussed above in connection with the leasing or buying options, when a user selects either menu item 92 or 94 the forms at blocks 62 or 64 are activated. From the form of block 64 an amortization schedule can be pulled up at block 68, as discussed above.

Referring again to Figure 1, selecting reference numeral 38 from Figure 1 brings up the "Cash back analyses" screen 25 (Figure 20). This screen allows a user to evaluate the differences between accepting a "cashback" offer from the dealer, with a low interest rate, or taking the cash and shopping for a third party loan.

Referring again to Figure 1, selecting button 34 and clicking "Next" takes the user to block 100, which is screen 9, shown in detail at Figure 21. The user selects one or more options at this screen and then clicks the "Show qualified vehicles" button 102, which takes the user to block 104 in Figure 1, which is screen 37, shown in detail at Figure 22. Figure 22 is a list of vehicles filtered to have the options selected in Figure 21. As discussed above, the user may select a particular vehicle and pull up form 20 at block 64 of Figure 1, and from form 20 may pull up an amortization at block 68 of Figure 1.

Referring again to Figure 1, selecting button 36 and clicking "Next" takes the user to block 106, which is screen 7, shown in detail at Figure 23. The user selects one or more features at this screen and then clicks the "Show qualified vehicles" button 108, which takes the user to block 110 in Figure 1, which is screen 10, shown in detail at Figure 24. Figure 24 is a list of vehicles filtered to have the features selected in Figure 23. As discussed above, the user may select a particular vehicle and pull up form 20 at block 64 of Figure 1, and from form 20 may pull up an amortization at block 68 of Figure 1.

Referring again to Figure 1, selecting reference numeral 40 from Figure 1 brings up the "lease detective" screen no. 22 (reference numeral 44 Fig. 1), shown at Figure 25, which allows the user to adjust and change the various credits, interest rate, money factors etc. to arrive at an offer based on a monthly lease cost. The numbers in the "Confirm" column as calculated assume that the other four entries in the "Quoted" column are accurate. If the "Confirm" numbers do not match the numbers the dealer is

quoting than one of the four variables in the "Quoted" column may include some charge not disclosed by the dealer.

The above disclosure is intended to be illustrative and not exhaustive. This description will suggest many variations and alternatives to one of ordinary skill in this art. All these alternatives and variations are intended to be included within the scope of the claims where the term "comprising" means "including, but not limited to". Those familiar with the art may recognize other equivalents to the specific embodiments described herein which equivalents are also intended to be encompassed by the claims.

Further, the particular features presented in the dependent claims can be combined with each other in other manners within the scope of the invention such that the invention should be recognized as also specifically directed to other embodiments having any other possible combination of the features of the dependent claims. For instance, for purposes of claim publication, any dependent claim which follows should be taken as alternatively written in a multiple dependent form from all prior claims which possess all antecedents referenced in such dependent claim if such multiple dependent format is an accepted format within the jurisdiction (e.g. each claim depending directly from claim 1 should be alternatively taken as depending from all previous claims). In jurisdictions where multiple dependent claim formats are restricted, the following dependent claims should each be also taken as alternatively written in each singly dependent claim format which creates a dependency from a prior antecedent-possessing claim other than the specific claim listed in such dependent claim below (e.g. claim 3 may be taken as alternatively dependent from claim 2; claim 4 may be taken as alternatively dependent on claim 2, or on claim 3; claim 6 may be taken as alternatively dependent from claim 5; etc.).

This completes the description of the preferred and alternate embodiments of the invention. Those skilled in the art may recognize other equivalents to the specific embodiment described herein which equivalents are intended to be encompassed by the claims attached hereto.